"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING DISASTER MANAGEMENT AMONG STUDENTS SELECTED NURSING SCHOOLS IN KANYAKUMARI DISTRICT"

By

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Dissertation Submitted to

THE TAMILNADU DR. M.G.R. MEDIAL UNIVERSITY

Chennai, Tamilnadu.

In partial fulfillment

Of the requirements for the degree of

Master of Science

In

Medical – Surgical Nursing

(Sub Specialty – Critical Care Nursing)

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APRIL 2015

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VIVA VOCE:

1. **INTERNAL EXAMINER : ….……**
2. **EXTERNAL EXAMINER: …….**

APRIL 2015

ENDORSEMENT BY HEAD OF INSTITUTION

This is to certify that the dissertation entitled **"A study to evaluate the effectiveness of structured teaching programme on knowledge regarding disaster management among students selected nursing schools in Kanyakumari district"** is a bonafide research work done by **Mr. Arun jothi** under the guidance of **Mrs. K.KALAIVANI., M.Sc (N), PRINCIPAL of** Dr. Mahalingam College of Nursing.

Signature of the Principal

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LIST OF ABBREVIATIONS
(Alphabetical order)

DMIPSR	Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences and Research.
et.al	And others
F	Figure
H1	Research hypothesis 1
ICU	Intensive Care Unit
STP	Structured teaching programme
M.Sc., (N)	Master of science (Nursing)
No.	Number.
P	Probability.
Pc B.Sc.,	Post Bachelor of Science (Nursing).
Prof.	Professor.
S.D	Standard deviation.
χ^2	Chi-square test
%	Percentage

ABSTRACT

INTRODUCTION

A disaster is a natural or manmade event that negatively affects life, property, livelihood or industry often resulting in permanent changes to human societies, ecosystems and environment. Disasters arise without direct human involvements are known as natural disasters. It can be more severe than man made. The disasters having an element of human intent or negligence are called manmade disasters. Disaster have five phases such as warning period, impact, threat period, inventory period and rescue period.

Disasters cannot be prevented but their impact on people's lives can be reduced to a considerable extent. Disaster management covers all aspects of preventive and protective measures, preparedness, rescue, relief, and rehabilitation operations. It has three phases as follows; impact phase, relief and rehabilitation phase and long term mitigation and preparedness phase.

The disaster managers are health team members, administrative officers, police, rescue teams and volunteers. They must be confident in their function, training and capacity to ensure public safety during the disaster.

STATEMENT OF THE PROBLEM

"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING DISASTER MANAGEMENT AMONG STUDENTS SELECTED NURSING SCHOOLS IN KANYAKUMARI DISTRICT"

OBJECTIVES OF THE STUDY

1. To assess the existing level of knowledge of students on disaster of management
2. To evaluate the effectiveness of structured teaching programme on the knowledge of students
3. To identify the association between the students level of knowledge and selected demographic variables.

METHODOLOGY

The research approach used for the study was qualitative, educative and evaluative approach and the research design used was quasi-experiment design, in that pre-experimental one group pre test and post test design.

The study was conducted in LIMBA SCHOOL OF NURSING, NAGERCOIL. 50 students were selected by using purposive sampling technique. The data collection method used for this study was self-report method. Self administrated questionnaire was used for data collection. Descriptive statistical and inferential statistics were used to analyze the data and to test hypothesis.

RESULTS:

- The knowledge regarding disaster management among students in pre-test, the mean score was 20.18 and standard deviation was 1.826.
- The effectiveness of structured teaching programme have been evaluated

and found effective with highly statistically significant values, (such as mean score = 31.26, standard deviation=1.826 and the 't' value=42.375 with the p value= <0.05).

- There was no significant association between the pre-test knowledge of the students with the demographic variables namely age, sex, educational qualification and working unit except years of experience.

CONCLUSION

This study has proved that the students had a remarkable increase in the knowledge regarding disaster management, when compared to their previous knowledge, prior to the administration of the structured teaching programme. This study plays an important role in prevention and management of impact in various disasters. This study has not only improved the knowledge of the students. It could be considered as a part of continuing professional development of students in all aspects.

KEY WORDS

Evaluate, effectiveness, structured teaching programme, knowledge, disaster, disaster management, students.

CHAPTER -1

INTRODUCTION

'A stitch in time saves nine"

Emergencies and disaster not only affect health and well being of people, frequently large number of people are displaced, killed or injured or subjected to greater risk of epidemics. Considerable economic harm is also common. Disaster cause great harm to the existing infrastructure and threaten the future of sustainable development. Disasters are not confined to a particular part of the world, they can occur anywhere and at any time. Major emergencies and disaster have occurred throughout the history, as the world's population grows and resources become more limited, community are increasingly becoming vulnerable to the hazards that cause disaster.

The relative number of injuries and death differ, depending on the number of factors such as the type of disaster, the density and distribution of the population, condition of the environment, degree of the preparedness and opportunity of the warning.

According to the word detective (http://www.word-detective.com) the word disaster is built up from the Latin elements meaning "away", "wrong" or "not", "aster", meaning "star". So when your stars were in a bad position (based on astrology), a "disaster" is about to happen.

A Disaster may have the following main features i.e. unpredictability, unfamiliarity, speed, urgency, uncertainty and threat. Disaster can be of two categories natural and manmade. Natural disasters arise without direct human incoherent, but can become more severe because of human action prior, during or after the disaster itself. Also, one specific event may spawn another type of disaster. For example, a hurricane may cause flooding by excessive rain or by pulling sea water onshore, also called a storm surge.

Natural disaster can be classified by nature, timing, predictability, response time and type of impact. According to time disaster is classified into two, slow (eg. Drought, famine, food shortage) and quick. The quick disaster again divided into predictable (eg. cyclone, flood and typhoon) and unpredictable or sudden (eg. earthquake, landslide: avalanche).

According to response the time disaster is divided into three categories such as long response time (drought, famine), short response time (cyclone, floods) and no response time (earthquake, landslide).

According to impact, disaster is classified into four i.e. affect all aspects of life (cyclone, flood, landslide), loss of life and damage to physical infrastructure (earth quake) and affect live hood and cause environmental degradation (drought, forest, fire) and threaten only lives (famine).

Disasters having an element of human intent or negligence are called man -made disasters. The manmade disaster is classified in two major disaster (setting of fires, epidemic, deforestation, pollution due to prawn cultivation, chemical pollution, & wars) and minor disaster (road / train accidents, riots, food poisoning, industrial disaster, crisis, environmental & pollution).

Disaster have five phases such as warning period, impact period, threat period, inventory period, rescue period. During disaster the actions taken by an organization in response to unexpected events that are adversely affecting people or resources and threatening the continued operation of the organization that is known as disaster management. It includes the development of disaster recovery plans, for minimizing the risk of disaster and for handling them when they occur, and the implementation of such plans. It is carried out by the disaster management team. The members are administrative officers, physicians, students, police, rescue team, volunteers.

Disaster management has three phases as follows: pre impact phase (forecast, early warning, preparedness), impact (close monitoring of impact, establishing emergency communication and deploying rescue teams) and post impact (medical care, food, clothing & shelter for rescued people, estimating loss of life and property, disposal of bodies, animal carcasses and prevention of epidemics.

STATEMENT OF THE PROBLEM

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OBJECTIVES OF THE STUDY

1. To assess the existing level of knowledge of students on disaster of management
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3. To identify the association between the students level of knowledge and selected demographic variables.

NEED FOR THE STUDY

On August 6 and 9, 1945, the cities of Hiroshima and Nagasaki were destroyed by the first atomic bombs used in warfare.

The first atomic bomb ever to be used in a military operation was dropped on the city of Hiroshima, Japan on August 6, 1945 at 8:16:02 a.m. Hiroshima time. The bomb affectionately named "Little boy," exploded 1,900 feet above the courtyard of Shima Hospital, with a force equivalent to 12,500 tons of TNT. By the end of 1945, 140,000 people have died as a direct result of

the bombing. Within the following five years, another 60,000 would die of bomb related causes.

The second bomb, called "Fat Man," exploded over Nagasaki, Japan, at 11:02 a.m. on August 9, 1945. It exploded at 1,650 feet with a force of 22,000 tons of TNT. 70,000 people lost their lives in Nagasaki by the end of 1945 due to the bombing. A total of 140, 00 died within the next five years.

Since World War II, there have been about 127 wars and 21.8 million war-related deaths involving more than 50 percent of civilians.

Bhopal Gas Tragedy in India on 3rd December 1984. About 2 million people were exposed to the gas leaving about 3000 dead. People are still suffering from the adverse effects of the gas. The second example is the accident at reactor 4 of the Chernobyl nuclear power station in the Soviet Union on April 26, 1986, which resulted in the largest reported accidental release of radioactive material in the history of Iodine 131, Caesium 134 and 137, Strontium 90 and other Isotopes throughout the northern hemisphere.

Droughts and floods in many states are perpetual and occurrence is witnessed almost every year in states like Bihar, Orissa and North Eastern states. Severe and super cyclone hit Orissa in 1999; Gujarat was affected with severe earthquake in January, 2001 which left over 16,000 people dead and many disabled besides loss of property and homes.

The latest example is the attack on twin buildings of World Trade Centre in New York. The September 11 attacks were a series of coordinated suicide attacks by al-Qaeda upon the United States on September 11, 2001. On that morning, 19 al-Qaeda terrorists hijacked four commercial passenger jet airlines. The hijackers intentionally crashed two of the airlines into the Twin Towers of the World Trade Centre in New York City, killing everyone on board and many others working in the buildings. Both buildings collapsed within two hours, destroying nearby buildings and damaging others, in which about 6000 people lost their lives and thousands were injured.

During the year 2001-2002, over 16 states were affected with heavy rains, landslides and floods. This affected 115 districts involving more than 17000 villages. About 379 districts in 18 states were affected by drought due to sluggish monsoon.

During 2003, 16 states were affected by heavy rains landslides and floods. This affected 236 districts involving more than 41,408 villages. About 158 districts in the other states were affected by drought.

On December 26, 2004 a massive undersea earthquake originating in Indonesia, followed by killer sea waves (Tsunami) affected many countries in the region including India, Thailand, Malaysia, Myanmar, Bangladesh, Maldives, Somalia, Tanzania and Kenya. Over 130,000 people lost their lives with wide spread damages to property and homes and it rendered many people homeless.

A very severe earthquake measuring magnitude of 8.9 on Richter scale struck northern Sumatra, Indonesia at 06:28 AM 1ST. The earthquake was felt widely along the east coast of India.

Out of the 30 districts in the states, 13 districts namely Chennai, Kanchepuram, Tiruvallur, Cuddalore, Villupuram, Nagapattinam, Thiruvarur, Thanjavur, Kanniyakumari, Thoothukudi, Tirunelveli, Ramanthapuram and Pudukottai have borne the brunt of Tsunami covering 373 Coastal Village/Kuppams. About 8.9 Lakh people have been affected. 1,24,227 houses are reported to have been damaged, with Nagapattinam District topping the list with 36,860 houses located in 73 villages. Enumeration of houses damaged is still on and the final figure may go up to 1.50 lakhs.

Multiple sites in the Indian city of Mumbai were attacked with bombs and gunfire in a coordinated terror attack that began on November 26, 2008, and lasted for three days. The attacks killed 179 people, 300 peoples were injured.

On 22 May 2010, around 6.30 local time, air India express flight 812, a Boeing 737-8HG, registration VT-AXV, on a scheduled passenger flight from Dubai, UAE to Mangalore, India overran the runway while landing at Mangalore International Airport. It over shot the runway falling over a cliff and caught fire; the resulting wreckage was spread over the hillside. There were 160 passengers and 6 crew members on board the aircraft. Of these, only eight passengers survived.

Indian train crashes

- 28 May 2010: nearly 150 people died in a derailment blamed on Maoist rebels in west Bengal.
- 14 November 2009; at least seven are killed when an express train crashes near Jaipur.
- 2 November 2009:14 are killed when a passenger train rams in to a truck at an unmanned crossing in the state of Uttar Pradesh.
- 21 October 2009: two passenger trains collide near Mathura in Northern India, killing at least 22.
- 14 February 2009: at least 15 people are killed in a train derailment in the state of Orissa.

HYPOTHESES

H_1 - There will be a significant difference between the pre - test and post test knowledge scores on disaster management among students.

OPERATIONAL DEFINITION

Disaster

A disaster is any event, natural or manmade, which threatens human lives, damages private and public property, and infrastructure, and disrupts social and economic life.

Disaster management

Disaster management covers all aspects of preventive and protective

measures, preparedness, and rescue relief and rehabilitation operations.

Staff Nurse

Nurse is a health care professional who, in collaboration with other members of a health care team, is responsible for treatment, safety, and recovery of acutely or chronically ill individuals.

Nursing

The work of caring for the sick or injured or infirm.

Evaluate

To assess or estimate the nature, value, or quality (or) to judge or decide the amount, value, quality or importance.

Effectiveness

It refers to the extent to which the teaching programmes that has achieved the desired effect.

Knowledge

Expertise, and skills acquired by a person through experience or education.

Structured Teaching Programme

The arrangement and relation between the parts or element, something complex.

It refers to the systematically developed and designed information to

teach disaster management.

Assumption

1. Students have the potential to learn about the disaster management because they are the members of disaster management team.
2. Structured teaching programme is an effective way to improve the knowledge of students regarding disaster management.

Limitation

1. The questionnaire with multiple choices must have prompted the staff nurse to give responses, hence, the possibility of getting average and good score could be a chance factor in this study, which is a limitation of the tool.
2. Non - standardized tool is used for this study.
3. The study is limited to 60 samples only.
4. The study is conducted only in one nursing school at kanyakumari district.

CONCEPTUAL FRAME WORK

BETTY NEUMAN'S SYSTEMS MODEL

Betty Neuman's Systems model was first published in 1972 in nursing research as a model for teaching total person approach to patient problems.

The Neuman's model focuses on stress and stress reduction and is primarily concerned with the effects of stress on health. This system model consists, of the following which are basic core structures, line of resistance, normal lines of defence, flexible line of defence.

According to Neuman, there are 3 levels of prevention which as follows primary prevention, secondary prevention, tertiary prevention. In this study **primary prevention** is forecast, early warning, preparedness, monitoring approach of disaster and alertness. This may help to manage the disaster before it occurs.

Secondary prevention refers to intervention after a reaction occurs. In this study secondary prevention refers to close monitoring of impact of disaster, establishing emergency communication, developing rescue teams, medical support and other life saving activities and supply of essential items. **Tertiary prevention** refers to intervention after active treatment of a reaction. In this study, the tertiary prevention refers to rehabilitation measures such as temporary shelter drinking water, food, clothing, minimum house hold utility,

repair of roads, electricity, communication networks, salvaging damage to agriculture, distribution of seeds, fertilizer, restoration of health & educational facilities and building durable houses for victims.

Neuman describes a stressor as any environmental force that alters the system's stability. Stressor can occur in any number, at any time & in different forms; the same stressor can vary in impact or reaction.

The stressor is divided into three as intrapersonal stressors, interpersonal stressors, and extra personal stressors.

Intrapersonal stressors are those stimuli that occur within the individual. In this study intrapersonal stressors refer to curriculum, previous experience and in-service education.

Extra-personal stressors are those stimuli that occur outside the person. In this study the extra-personal stressors are natural & manmade disasters that have the potential effect on the level of knowledge among the students.

Line of resistance

These lines vary in size and distance from the center, they are called flexible lines of resistance which represent the internal factors of a person that defend a stressor. In this study, the line of resistance refers to knowledge of the students about the triage and emergency management.

Normal line of defence

It is represented in Neumann's model as a solid line outside the lines of resistance refers to the equilibrium state or the adaptation state a client has developed ever a time; this state is the norm for the client. In this study the normal line of defence refers to competency of students.

Flexible line of defence:

It is depicted in Neuman's model as a broken line outside the normal line of defence, acts as a protective barrier to prevent stressors from breaking through the normal line of defense. It is dynamic and can change rapidly over a short time and it can be affected by variables. In this study, the flexible line of defence refers to curriculum, experience, in-service education.

CHAPTER II

REVIEW OF LITERATURE

"The sources are all around us"

The term literature review refers to an extensive and systematic examination of publications relevant to research project. Before starting any research, a literature review of previous studies and experiences related to the proposed investigation must be done.

Related literature was reviewed in depth regarding disaster management for the present the present study. The review of the literature is organized under the following headlines.

i. Literature related to disaster

ii. Literature related to disaster management

iii. Literature related to disaster preparedness

1. LITERATURE RELATED TO DISASTER

Morren M, Dirkzwager AJ, 2007, Netherlands, described the influence of a disaster on the health of rescue workers: a longitudinal study. They carried out a 4 year longitudinal study of 1403 rescue workers employed in or near the affected nighbourhood (the study group) and a control group of 1650 uninvolved rescue workers (from another city of similar size and urbanization). Health outcomes were measured as prevalence, incidence (both

measured as the percent of workers who took sick leave), frequency of the absences and number of sick days (both per 100 workers), and duration (mean length of sickness absences, in days) of the results: Sick leave among the study workers increased substantially during the 18 months after the explosion. For example, the prevalence of absences attributed to psychological problems increased from 2.5% of workers during the 6 months before the disaster to 4.6% during the first 6-month period after the explosion and 5.1% during the second, That for respiratory problems rose from 5.4% pre-disaster to 14.9% 6-12 months afterward. In comparison with controls, immediate increases occurred in musculoskeletal, psychological, respiratory and nonspecific ill health *(e.g.,* malaise, fatigue) during the first year post-disaster. Rates of sick leave for musculoskeletal and respiratory reasons remained elevated until 3 years post-disaster, whereas, leave for psychological problems and other ill health had returned to pre-disaster levels by then. Neurological problems increased after 1-year delay. No significant increase in gastrointestinal problems was observed among the study workers, in comparison with controls.

Mitani S, Kuboyama K, 2003, Japan, stated that nursing is sudden-onset disasters: factors and information that affect participation. A standardized written survey tool was developed using input from four students who had responded to the disaster event. Questionnaires that included both "yes" and "no" answers and multiple - choice answer were developed and sent to 823 students who worked in four hospitals. Results was total of 477/823

(58.0%) questionnaires were completed and returned of the respondents to the questionnaire, 309 (62.1%) were qualified students, and 148 (37.9%) were students. Sixty-nine (15%) of the total 477 respondents participated in the disaster response to the Great Hanshin-Awaji Earthquake.

II. LITERATURE RELATED TO DISASTER MANAGEMENT

Jacobson HE, Soto Mas F, 2010, USA, described that students, particularly public health students, play a key role in emergency preparedness and response in rural areas. He used. Cross-sectional prevalence of practicing students in regions of North Texas. 3,508 rural students practicing in North Texas participated in the study. Data were collected through a mailed survey; analyses included multi nominal logistic regression and descriptive statistics. He reported that Licensing agencies, professional organizations, and community constituencies may need to play a stronger role in improving the bioterrorism-related emergency preparedness of rural students.

Milligan G, McGuinness TM. 2009, USA, stated that maintenance of a daily routine, which includes scheduled medications, access to a health care provider, and a stable environment forms an anchor point in the lives of people diagnosed with mental illness. A review of the literature indicates that the impact on survivors' mental well-being is directly related to the level of exposure to a disaster. Mental health professionals must include crisis

management, planning, and communication in pre and post-disaster interventions with people who have mental illness.

Fenzl M, Jolliff H, 2008, USA, described that chemical exposure preparedness for emergency departments in a Midwestern-city. He collected data through Surveys. The survey was performed in a large Midwestern city (metropolitan population of 1,500,000) nine hospitals. He reported that twelve of the 27 respondents returned the survey for a response rate of 44 percent. None of the EDs had a known cooperative written plan with the police or fire departments. Three safety officers reported limited numbers of hospital security personnel and a total of 35 ventilators for respiratory failure. The four pharmacy directors reported limited sum doses of atropine (315), cyanide antidote (10 complete kits), and succimer (100). Respondents who felt qualified to evaluate the ED gave a mean score of 5.4 on a scale of 1-10 when asked how prepared they felt their ED was to treat 50 chemical exposure patients.

Beaton R, Bridges E, 2008, USA, stated that ecological model of disaster management. This ecological model assumes that disaster planning, preparedness, response, and recovery occur at various levels of the organization. Finally, the model assumes that evaluation of response and recovery efforts should inform future planning and preparedness efforts.

O'Sullivan TL, Turner MC, 2008, Ontario, Canada, Disaster and emergency management. The data collected by e-mail notices it was completed by 30-minute in online survey. The results was total of 1,543 students completed the survey (90% female; 10% male). The results indicate that, students feel unprepared to respond to large-scale disasters/attacks. They reported that Canadian students have indicated that considerably more training and information are needed to enhance preparedness for frontline healthcare workers as important members of the response community.

Cherry RA, Trainer M. 2008, USA, The current crisis in emergency care and the impact on disaster preparedness. The Homeland Security Act (HSA) of 2002 provided for the designation of a critical infrastructure protection program. This ultimately led to the designation of emergency services as a targeted critical infrastructure. In the context of an evolving crisis in hospital-based emergency care, the extent to which federal funding has addressed disaster preparedness will be examined. That shows insufficient federal funding has contributed to a long-standing counter-trend which has eroded as emergency medical care. Currently, the nation is unable to meet presidential preparedness mandates for emergency and disaster care. Federal funding strategies must therefore be re-prioritized and targeted in a way that reasonably and consistently follows need.

Chokshi NK, Behar S, 2008, USA, Disaster management among paediatric surgeons: preparedness, training and involvement. The authors conducted an anonymous online survey of members of the American Paediatric Surgical Association in 2007. The authors sent 725 invitations and received 265 (36.6 percent) completed surveys. Overall, the authors found that 77 percent of the respondents felt “definitely” responsible for helping out during a disaster but only 24 percent of respondents felt "definitely" prepared to respond to a disaster. Most felt they needed additional training, with 74 percent stating that they definitely or probably needed to do more training. Investigator report shown that a minority of paediatric surgeons feels prepared, and most feel they require more training. Current training methods may be ineffectual in building a prepared and willing pool of first receivers. Disaster planners must plan for healthcare worker related issues, such as transportation and communication. Further work and emphasis is needed to bolster participation in disaster preparedness training.

Chan EY, Sondorp E. 2007, UK, Medical interventions following natural disasters: missing out on chronic medical needs. Many post-disaster medical relief intervention programmers only focus on the provision of acute medical services and the control of communicable diseases. Currently, no specific study has examined why chronic medical needs seem to be insufficiently addressed in disaster relief interventions. The researcher recommended that the technical training of local staff, establishment of

essential drug and supply lists, and the provision of a range of medical services that may address chronic health needs.

Joshi sonopant G, 2007, Pune, conducted a study to assess the nurse knowledge about disaster nursing and explore their ability to react when disaster strikes. Research approach adopted was descriptive survey method .the report was F ratio =29/21 =1.38, the level of significance2.76.

Cone DC, Cummings BA., 2006, USA, Hospital disaster staffing: To assess hospital employees' attitudes and needs regarding work commitments during disasters. For that 12-items survey was distributed to employees at nine hospitals in five states. The researcher reported that Eighty-seven percent of respondents were willing to work after a fire/rescue/collapse mass casualty incident. Respondents were otherwise less willing to work in response to a man-made disaster (biological event: 58 percent; chemical event: 58 percent; radiation event: 57 percent) than a natural disaster (snowstorm: 83 percent; flood: 81 percent; hurricane: 78 percent; earthquake: 79 percent; tornado: 77 percent; ice storm: 75 percent; flu epidemic: 72 percent) ($p<0.001$ for all comparisons by chi2 testing). While 44 percent of respondents would come to work in response to any of the 11 disaster types listed, 19 percent were only willing to cover four or fewer types. The majority of hospital workers surveyed were willing to report to work in response to some types of disasters but not others, and some indicated they might not be available at all due to conflicting emergency response obligations.

Suja suresh, 2005, Delhi, conducted a study to evaluate the effectiveness of structured teaching programme on knowledge and practice of disaster management among school teachers. A true experimental randomized pre test control group design was adapted for this study. Simple sampling was used to select the sample of 60 School teachers (30 conrol and 30 experimental groups) a structured questionnaire was developed by the investigator. The result was a positive correlation between the knowledge and practice in the experimental group in post -test. There was no significant association between the knowledge and practice with demographic variables of the school teachers.

Williams J, Nocera M, etal., USA, The effectiveness of disaster training for health care workers: a systematic review. Even though investigator recommended to conduct many disaster training programme for health worker in future. The available evidence is insufficient to determine whether training interventions for health care providers are effective in improving knowledge and skills in disaster response.

Williams JR, Silenas R, 2005, USA, The role of public health students in bioterrorism preparedness. A qualitative study on disease surveillance was conducted with public health officials at regional and local levels, working in a variety of urban and rural settings in one large public health region in Texas. Data analysis was supported by qualitative research software. The Ethnograph. The study's findings could have implications for public policy and nursing

leadership. Defining the structure of the public health system and the scope of public health students' responsibilities will serve as the cornerstone for improvement of bioterrorism preparedness.

Gamble MS, Hanners RB, 2009, USA, Leadership and hospital preparedness: disaster management and emergency services in pediatrics. The study results shown that leadership is critical in emergency preparedness. Hospitals and other health care providers should consider special needs of pediatric patients in their planning, preparation, practice, and partnerships. Using a combination of regional, systems, and hospital approaches will yield more effective responses to disaster events.

Parker MM. 2006, USA, Critical care and disaster management. In recent years, there has been a great deal of attention paid in preparing the healthcare system to handle disasters, in particular terrorist events. Most of the attention has focused on the first responders and the initial emergency management. The Society of Critical Care Medicine (SCCM) can provide valuable expertise and educational programs to facilitate the needed disaster management planning.

III. LITERATURE RELATED TO DISASTER PREPAREDNESS

Landry LG, Stockton A., 2008, USA, Evaluation of a collaborative project in disaster preparedness. Students play an important role in responding to disasters. Preparing students to participate in planning for and responding to

a disaster is integral to undergraduate nursing education. The authors describe the evaluation of a collaborative learning model that has been used to teach undergraduate nursing students about disaster preparedness

Yorganci M, Yaman H., 2008, Turkey, Preparedness of primary healthcare centers for critical emergency situations in southwest Turkey. The survey was conducted in 21 PHCCs located in the rural city of Isparta, Turkey, in 2001. The availability of emergency equipment, emergency drugs, intravenous parenteral solutions, and diagnostic-therapeutic equipment was evaluated. Knowledge of basic life support of the staff (n = 195) was evaluated using a 10-item test. The study results shown that two (9.5%) PHCs had a complete emergency kit with an airways bag, mask, intravenous parenteral solutions, emergency drugs, and other diagnostic equipment. Emergency equipment was easily accessible in 19 PHCCs (90.5%), while in the remaining centres, the equipment and drugs were stored in locked cabinets. The staff t was evaluated in consisted of 43 doctors (22%), 132 students and midwifes (67%), and 20 health officers (11%). Doctors scored the highest knowledge score (65.5%), followed by students and midwives (58.6% and 56.7%, respectively), and health officers (52.5%). The researcher reported that Primary healthcare centers were not prepared to provide advanced life support. Knowledge scores were low and the staffs were in need of basic life support training. Further arrangements must be stressed to make PHCCs "emergency-friendly centres" in Isparta, Turkey.

Becker SM, Middleton SA., 2008, USA, Improving hospital preparedness for radiological terrorism: perspectives from emergency department physicians and students. At the request of the Centres for Disease Control and Prevention, researchers at the University of Alabama at Birmingham conducted a series of 10 focus groups (total participants, 77) with ED physicians and students at hospitals in 3 US regions. This study is the first to examine the views, perceptions, and information needs of hospital ED clinicians regarding radiological terrorism. As such, the findings may be useful in informing current and future efforts to improve hospital preparedness.

Lee H, Chun BC, 2008, Korea, Education of bioterrorism preparedness and response in healthcare-associated colleges current status and learning objectives development researcher surveyed all medical colleges/schools, colleges/junior colleges that train students, emergency medical technicians or clinical pathologists, and 10% (randomly selected) of them that train general hygienists in Korea. The survey was conducted via mail from March to July of 2007 researcher surveyed 35 experts to determine if there was a consensus of learning objectives among healthcare workers, the results shown only 31.3% of medical colleges/schools and 13.3% of nursing colleges/junior colleges had education programs that included BT preparedness and responses in their curricula. The most common reason given for the lack of BT educational programs was 'There is not much need for education regarding BT preparedness and response in Korea'. None of the colleges/junior colleges that

train clinical pathologists or general hygienists had an education program for BT response. The researcher recommended to all colleges/junior colleges provides education for BT preparedness and response in curricula. It is necessary to raise the perception of BT preparedness and response to induce the schools to provide such programs.

Burda P, Sein Anand J, 2007, Warszawa, Strategic preparedness of selected hospitals to act during massive chemical disasters The study was carried on 146 persons, including 9 managers, 31 ward heads, 75 assistants, and 31 ward students. In statistical analysis the generalized linear model extended by random factors, particularly the Poisson's regression has been used. The majority of the medical staff did not know their role as well as the role of their hospitals in case of a chemical accident. There is an urgent need for courses about the procedures which should be used during chemical accidents. The lack of hospital preparedness to act during chemical disasters in the big cities suggests that a similar situation is common in other such medical units all over the country. Further investigations, especially in the hospitals which are placed near the potentially dangerous factories, should be carried on in the near future.

CHAPTER-III

METHODOLOGY

"We must be willing to get rid of the life we have planned,
So as to have the life that is waiting for us"

- Joseph Campbell

Research Methodology is a way to solve the problems systematically, according to Sharma (1990) the research methodology involves the systematic procedure by which the researcher starts from initial identification of the problem to its final conclusion.

The study is aimed at evaluating the knowledge of students regarding disaster management.

This chapter deals with the description of methodology, different steps, which were undertaken for gathering and organizing data for the investigation. It includes inscription of research approach, research design, setting, target population, sample size and sampling technique development and description of tools, pilot study, data collection and plan for data analysis.

RESEARCH APPROACH

"It is an applied form of research that involves finding out how well a program practice, procedure or policy is working."

- Polit and Beck, 2008.

The research approach used for this study is quantitative, educative and evaluative approach.

RESEARCH DESIGN

"The overall plan for addressing a research question, including specification for enhancing the study's integrity". **-Polit and Beck 2006.**

The research design used in this study is the quasi - experimental design that is one group pre-test, post-test design, is used for assessing the effectiveness of structured teaching program on knowledge regarding disaster management among students working in specialty hospital at Chennai.

Structured Teaching Programme

Group 1 Pre test ⟶ Post test

Pre - Experimental Design

$O_1 \times O_2 = E$

O_1 - Pre-test on disaster management

x - Treatment (Structured teaching programme)

O_2 - Post test on Disaster management

E - Effectiveness of structured teaching programme

VARIABLES

"An attribute of a person or object that varies and takes on different values". (e.g. body temperature, age, heart rate).

- **Polit and Beck, 2006.**

The variables included in this study are independent variables which explain the effect of dependent variable.

Independent Variable

“It is the variable that stands alive and is not depending on any other”. Structured teaching programme on disaster management is the independent variable for this study.

Dependent Variable

It is the outcome variable of interest. In this study, the knowledge of students on disaster management is the dependent variable.

Extraneous variables

"A variable that confounds the relationship between the independent and dependent variables and that needs to be controlled either through research design or statistical procedure".

- Polit and Beck, 2006.

Extraneous variables for this study are previous exposure of students to programmes, seminar, workshops, modules related to disaster management, hospital policies and procedure, etc.

SITE

“The overall location where a study is undertaken”.

In this study, site referred to school of nursing at kanyakumari district.

SETTING

"The physical location and conditions in which data collection takes place in a study". Setting for this study is school of nursing, kanyakumari district.

POPULATION

"The entire set of individuals or objects having some common characteristics". In this study, population includes the students studying in school of nursing, Kanyakumari district.

SAMPLE

Polit and Beck, 2006, defines sample as a subset of a population, selected to participate in a study. Sample for this study comprised of the students studying school of nursing, Kanyakumari district.

SAMPLING TECHNIQUE

In this study, non-probability, "Purposive" sampling techniques is used for the selection of the samples.

CRITERIA FOR SAMPLE SELECTION

The students selected based on predetermined criteria.

Inclusive criteria

- Students who are studying at school of nursing, Kanyakumari district.
- students who are willing to participate in the study.
- Students who are in nursing schools.

Exclusive criteria

- Students who are on leave.
- Students having less than 6 months of study.

DATA COLLECTION METHOD

Self-report method is used.

DATA COLLECTION INSTRUMENT

Data collection instrument used for this study, are

- Structured questionnaire
- Structured teaching programme

DEVELOPMENT OF THE DATA COLLECTION INSTRUMENT

To assess the knowledge of students regarding disaster management "A questionnaire was prepared based on the objective of the study after reviewing of literature on disaster management and considering the opinion of nursing subject experts and medical experts.

DESCRIPTION OF THE INSTRUMENT

The self administered questionnaire on disaster management consisted of 5 sections.

Section 1: Demographic data: It includes information regarding age, sex, educational qualification, present designation, years of experience, undergone in-service education and managed any disaster.

Section 2: Question on concept of disaster. It consisted 11 multiple choice questions.

Section 3: Questions on type of disaster. It consisted of 3 multiple choice questions.

Section 4: Questions on management of disaster. It consisted of 19 multiple choice questions.

Section 5: Questions on preventive measures and rehabilitation measures of disaster. It included 7 multiple choice questions.

SCORING INTERPRETATION

Knowledge

76-100%	-	Adequate
51 - 75%	-	Moderately adequate
50 and below	-	Inadequate

All the items were multiple choice questions, which had four alternative responses. A score of (1) for correct answer and a score of (0) for incorrect answer was awarded.

TESTING THE INSTRUMENT

VALIDATION OF THE TOOL

When an instrument is valid, it truly reflects concept, it is supposed to measure, and content validity of the instrument was assessed by obtaining opinion from the nursing and medical experts as per the suggestions appropriate modifications were made and the tool was finalized.

RELIABILITY

"The reliability of an instrument is the degree of consistency or accuracy with which an instrument measures an attribute, it is supposed to measure".

In order to establish reliability, test-retest, method is used. The self-administered questionnaire is tested among 5 students who were not included in the study, after 7 days, the same tool is administered without any manipulation to the same students. The reliability value is 0.9 which was indicated as high degree of reliability of the questionnaire.

PILOT STUDY

The pilot study is a small-scale version of trial run before the major study. Pilot study was conducted to ensure validity and reliability of the tool and structured teaching programme. The primary objective of the pilot study was to test the elements of the research proposal as possible; in order to correct, any part that does not work well. The pilot study was conducted among 5 students studying in school of nursing in john school of nursing in Kanyakumari District. In order to ensure the effectiveness of the structured

teaching programme. "Purposive sampling technique" and the self administered questionnaire were used to collect the data from students. Data analysis was done by using differential and inferential statistics. The study reports showed the feasibility of the study.

DATA COLLECTION PROCESS

Prior to data collection written permission was obtained from the concerned authorities. The study is conducted in cross school of nursing, nagercoil. Students who fulfilled the criteria were selected as samples by using purposive sampling techniques. Data was collected from the samples by administering self-administered questionnaires, after getting their consent.

After that, structured teaching programme was given then reassessed the level of knowledge with the help of the same self-administered questionnaire.

Data collection for the main study was done from 30.08.2010 to 21.09.2010. Total samples of the main study were 50 students.

DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and the testing of research hypothesis using those data.

The collected data was organized, tabulated and analyzed by using descriptive and inferential statistics.

- Demographic variables are to be analyzed in terms of frequencies and

percentage,

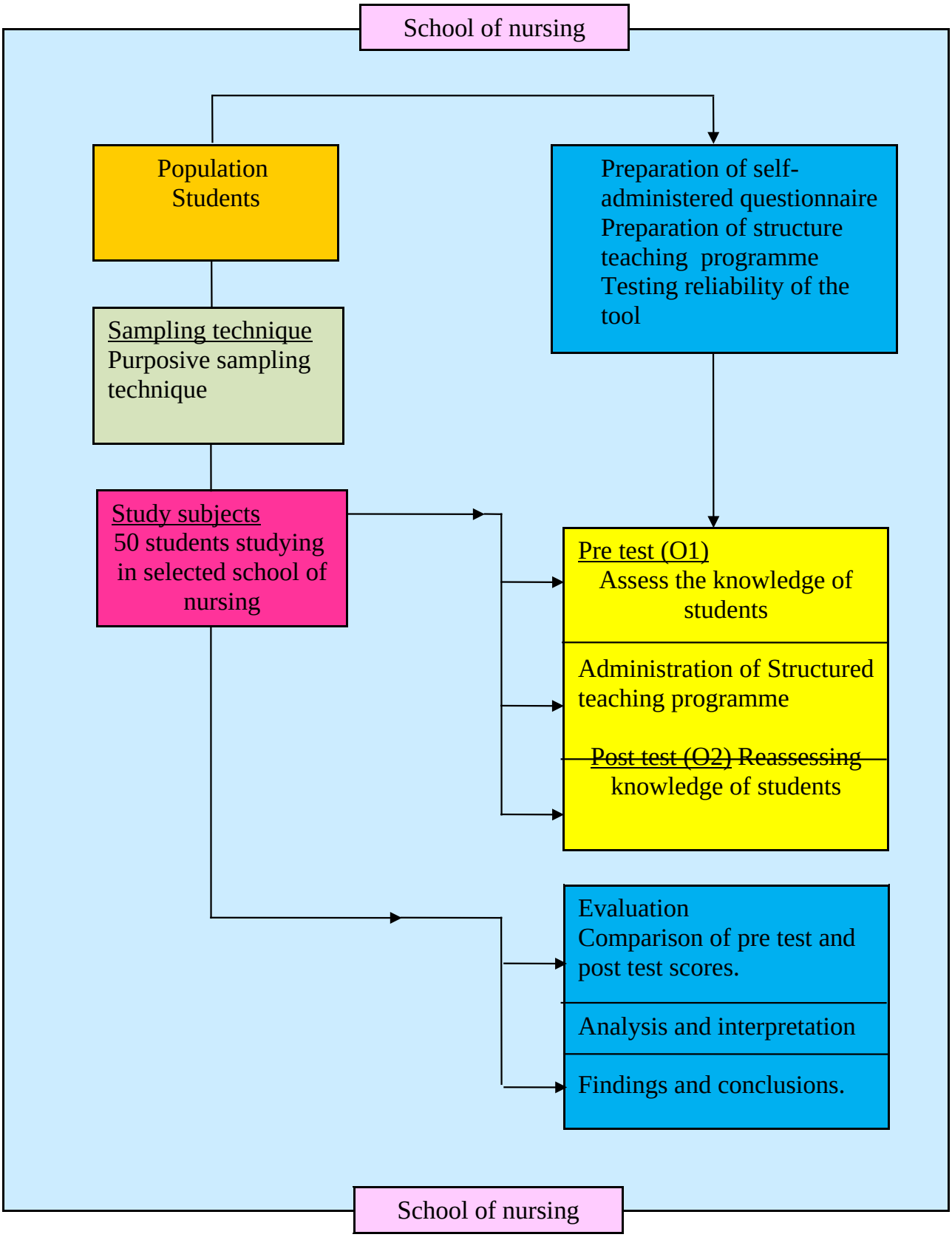
- Pre-test and post-test scores analyzed by mean, mean percentage and standard deviation.

- Knowledge between the pre-test and post-test was analyzed by paired 't' test.
- Association between the level of knowledge in the pre-test and post-test was find out by the chi-square test.

ETHICAL CONSIDERATION

The study was conducted after the approval of the "Dissertation committee" of the college. Permission was obtained from the chief medical officers of the specialty centre. Oral consent was obtained from each participant of the study before starting the data collection. Assurance was given to the participants that the anonymity of each individual and confidentiality would be maintained throughout the study.

Fig.2: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN OF THE STUDY



CHAPTER IV

ANALYSIS AND INTERPRETATION

“Learn from yesterday, live for today, hope for tomorrow.
The important thing is to not stop questioning”.

- Aristotle

Polit and Hungler, (2004) defines as categorizing, ordering, manipulating and summarizing the data to reduce it into intelligible and interpretable form, so that research problem can be studied and tested including relationship between the variables.

This chapter highlights the analysis and interpretation of data collected from 50 students working in specialty hospitals at Chennai in order to evaluate the effectiveness of structured teaching programme regarding disaster management on the knowledge of students. The data collected from the students before and after the structure teaching programme, was organized, analyzed and interpreted by using descriptive & inferential statistics.

The data collected was analyzed based on the following objectives of the study:

1. To assess the existing level of knowledge of students on disaster of management.

2. To evaluate the effectiveness of structured teaching programme on the knowledge of students.
3. To identify the association between the nursing students level of knowledge and selected demographic variables.

ORGANIZA TION OF FINDINGS

Section 1: Description of frequency and percentage distribution of the students according to the demographic variables.

Section 2: The percentage distribution of pre-test and post-test knowledge of the students on disaster management.

Section 3: Analysis of level of knowledge of the students regarding disaster management in the pre test and post test

Section 4: Association between the pre-test knowledge scores with selected demographic variables of students.

SECTION: 1

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDENTS ACCORDING TO THE SELECTED DEMOGRAPHIC VARIABLES.

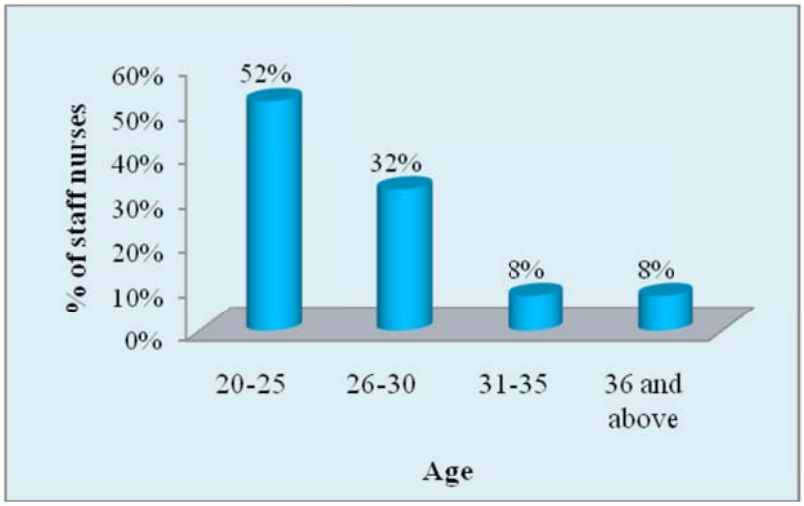
Table 1 : Demographic variables

Demographic variables		No of sample	Percentage
Age	17-18	26	52%
	18-19	16	32%
	19-20	4	8%
	20 and above	4	8%
Sex	Male	4	8%
	Female	46	92%
Educational qualification	DGNM I YR	27	54%
	DGNM II YR	11	22%
	DGNM III YR	12	24%
Working unit	Ward	20	40%
	ICU	7	14%
	Emergency and causality	23	46%
Experience	DGNM I YEAR	22	44%
	DGNM II YEAR	25	50%
	DGNM III YEAR	3	6%

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDENTS ACCORDING TO THEIR AGE

Demographic variables	No of the sample	Percentage
Age		
17-18	26	52%
18-19	16	32%
19-20	4	8%
20 and above	4	8%

Fig. 3: Cylindrical diagram showing the age of the students

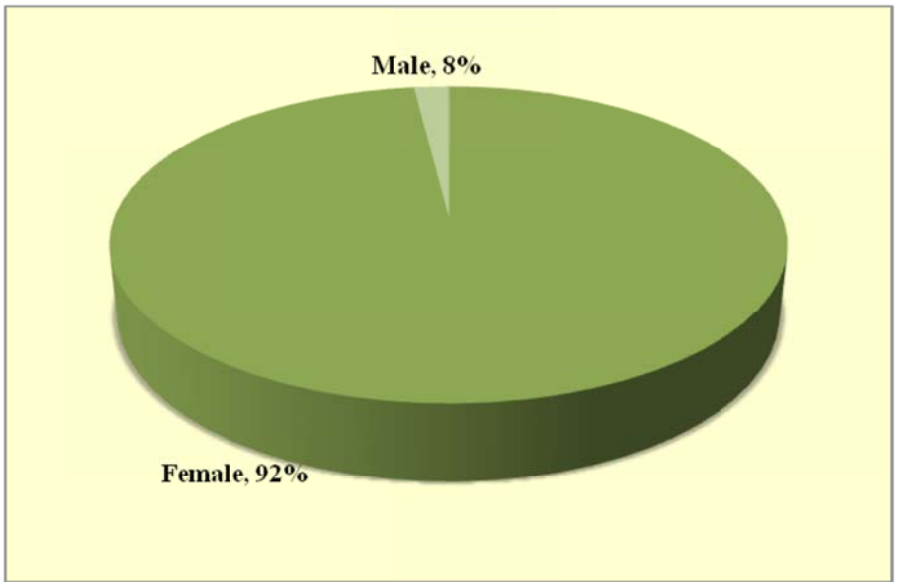


According to their age, 26(52%) of the students were in the age group of 20-25% years, 16(32%) were in 26-36 years, 4(8%) were in 31-35 and similarly 4(8%) with the age group of 36 and above.

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDENTS ACCORDING TO THEIR SEX

Demographic variables	No of the sample	Percentage
Sex		
Male	4	8%
Female	46	92%

Fig. 4: Pie diagram showing the sex of the students

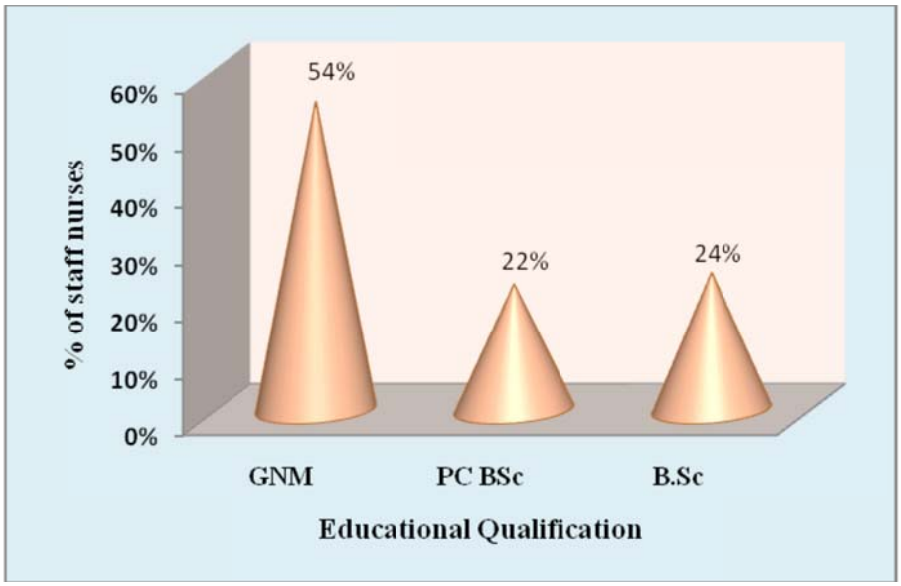


From the above data, it is shows that 4(8%) of the students were male, 46(92%) were female students.

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDENTS ACCORDING TO THEIR EDUCATIONAL QUALIFICATION

Demographic variables	No of the sample	Percentage
Educational qualification		
DGNM I YEAR	27	54%
DGNM II YEAR	11	22%
DGNM III YEAR	12	24%

Fig. 5 : Conical diagram showing the educational qualification of the students



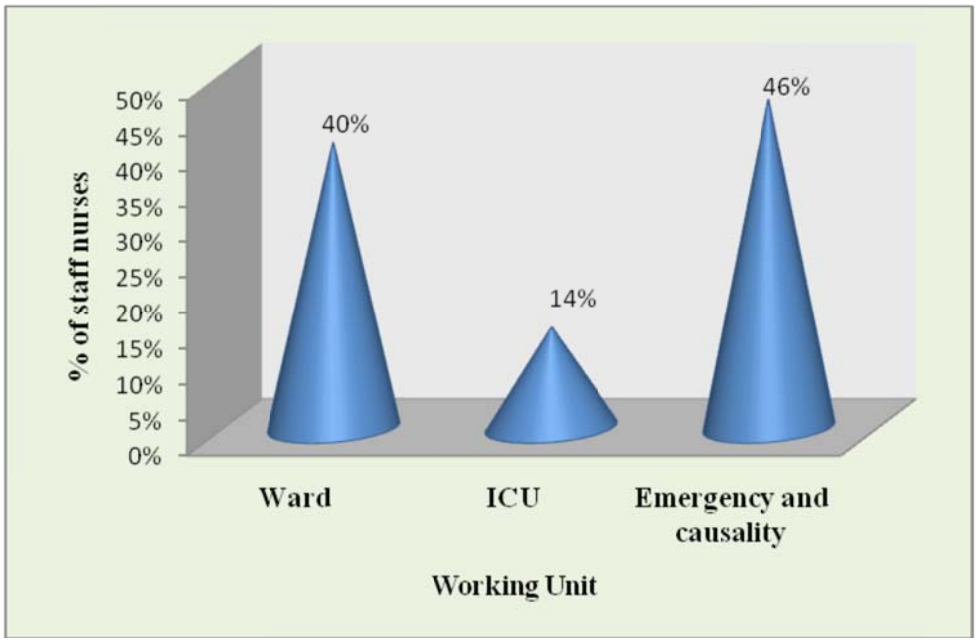
According to their educational qualifications, around 27(54%) of the students were with DGNM I Year qualification. The students 11 members with DGNM II year qualification were distributed with the percentage of 22 and the students 12 members with DGNM III year qualification was distributed with the percentage of 24.

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDENTS

ACCORDING TO THEIR UNIT

Demographic variables	No of the sample	Percentage
Training unit		
Ward	20	40%
ICU	7	14%
Emergency and causality	23	46%

Fig. 6 : Conical diagram showing the training unit of the students

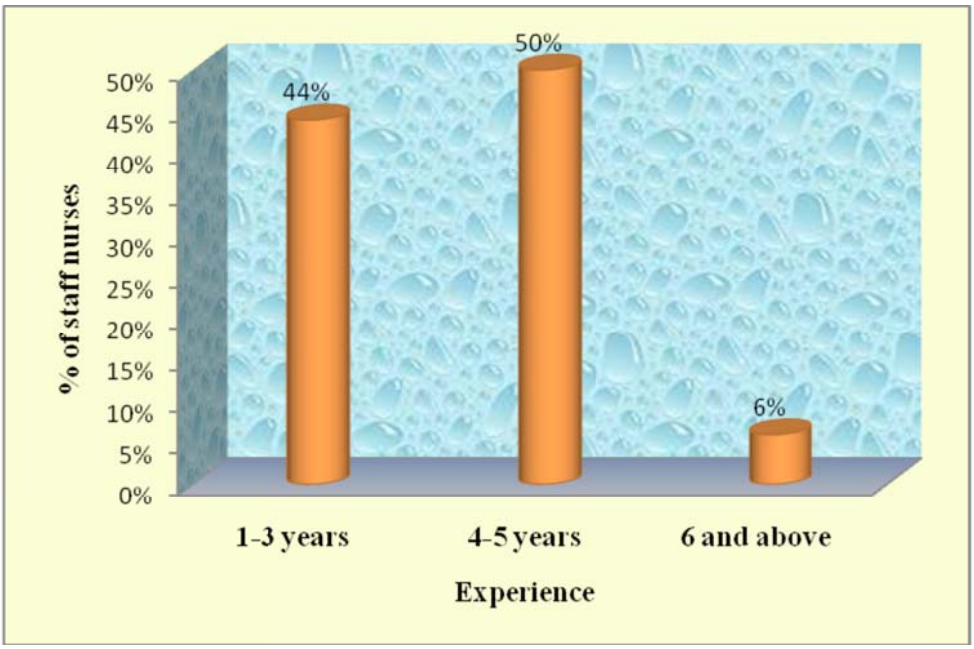


According to their training unit, 20(40%) of the students were in ward, 7(14%) were in ICU, 23(46%) were in emergency and causality.

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDENTS ACCORDING TO THEIR CLASS WISE EXPERIENCE

Demographic variables	No of the sample	Percentage
Experience		
DGNM I year	22	44%
DGNM II year	25	50%
DGNM III year	3	6%

Fig. 7: Cylindrical diagram showing the class wise experience of the students



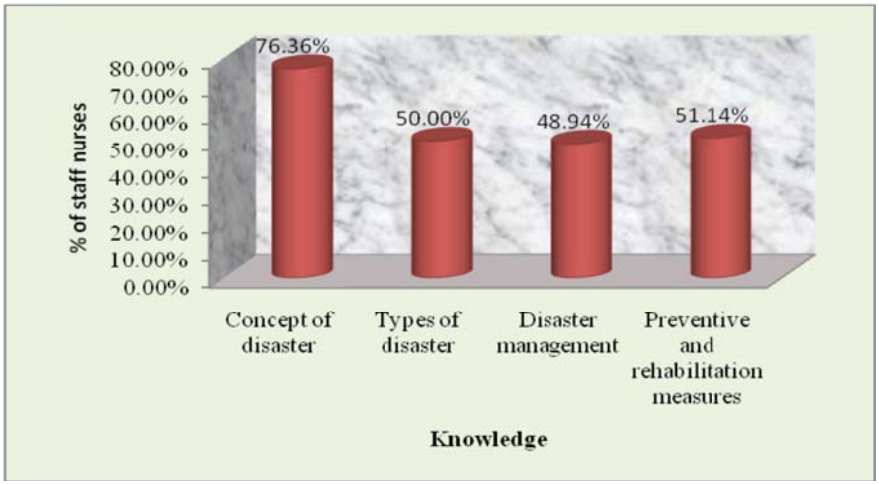
According to their experience 22(44%) of students were with DGNM I year, 25(50%) were DGNM II year and 3(6%) were DGNM III year.

SECTION 2

TABLE 2: ASPECT WISE PRE-TEST KNOWLEDGE SCORE REGARDING DISASTER MANAGEMENT AMONG STUDENTS

Aspect	Max	Mean	Mean %	SD
Concept of disaster	11	8.4	76.36	6.93
Types of disaster	3	1.5	50.00	0.94
Disaster management	19	9.3	48.94	3.91
Preventive and rehabilitation measures	7	3.58	51.14	1.61

Fig. 8: Cylindrical diagram showing that aspect wise pre-test knowledge scores regarding disaster management among students

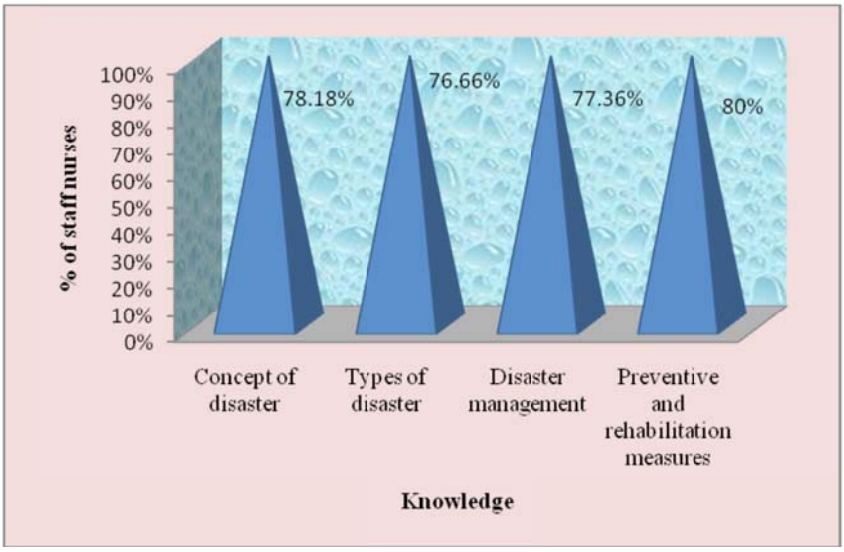


The cylindrical diagram shows that, in the pre-test, students had more knowledge (76.36%) on the concept of disaster and comparatively less knowledge (48.94%) in the disaster management. They had (50%) of knowledge on types of disaster and (51.14%) of knowledge on preventive and rehabilitation measures.

TABLE 3: ASPECT WISE POST-TEST KNOWLEDGE SCORE REGARDING

Aspect	Max	Mean	Mean %	SD
Concept of disaster	11	8.6	78.18	2.49
Types of disaster	3	2.3	76.66	0.49
Disaster management	19	14.7	77.36	1.90
Preventive and rehabilitation measures	7	5.6	80.00	1.18

Fig. 9: Pyramidal diagram showing that aspect wise post-test knowledge scores regarding disaster management among students

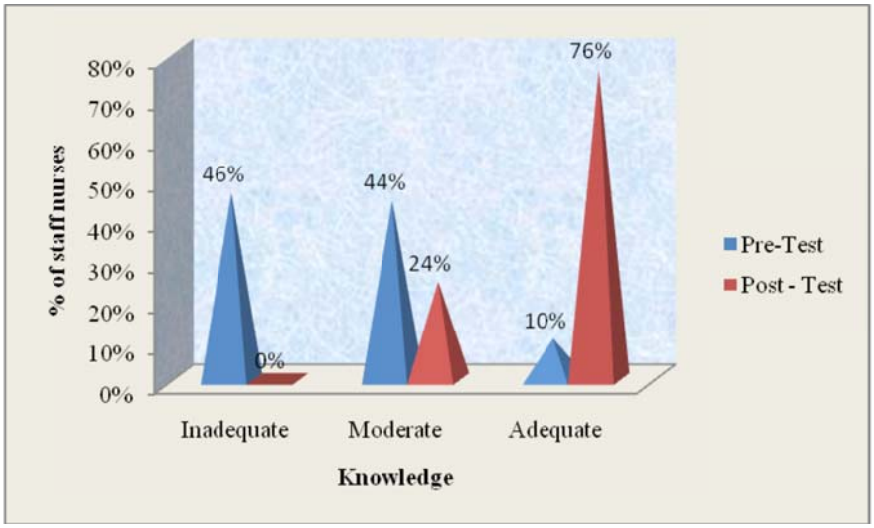


The cylindrical diagram shows that, in the post-test, students had more knowledge (80.00%) on the preventive and rehabilitation measures and comparatively less knowledge (76.66%) in the types of disaster. They had (77.36%) of knowledge on disaster management and (78.18%) of knowledge on concept of disaster.

TABLE 4: FREQUENCY DISTRIBUTION LEVEL OF KNOWLEDGE AMONG STUDENTS IN PRE AND POST TEST

Level of knowledge	Pre- test		Post-test	
	F	%	F	%
Inadequate	23	46%	0	0
Moderate	22	44	2	24
Adequate	5	10	38	76

Fig. 10: Pyramid diagram showing the level of knowledge Of the students



The findings of the Pre-test and Post-test knowledge is to know the effectiveness of structured teaching programme on disaster management among students. It is inferred that, in the pre-test, 46% of students were with an inadequate knowledge and 44% had moderate knowledge and 10% had adequate knowledge regarding disaster management. In the post test, 24% have demonstrated moderate knowledge and 76% have demonstrated an adequacy in their knowledge.

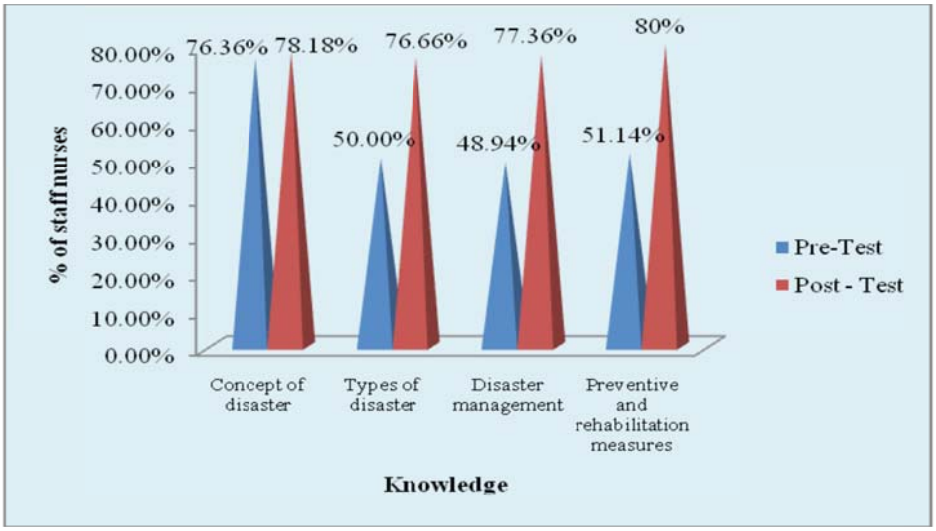
SECTION 3

TABLE 5: COMPARISON OF PRE-TEST AND POST-TEST KNOWLEDGE REGARDING DISASTER MANAGEMENT AMONG STUDENTS

(ASPECT WISE) :

Aspect	Observation	Mean	Mean %	Effect	SD	't' value	'p' value
Concept of disaster	Pre-test	8.4	76.36	1.82	2.852	6.823	P<0.05 significant
	Post-test	8.6	78.18				
Types of disaster	Pre-test	1.5	50.00	26.66	0.7812	9.318	P<0.05 significant
	Post-test	2.3	76.66				
Disaster management	Pre-test	9.3	48.94	28.42	3.2343	11.990	P<0.05 significant
	Post-test	14.7	77.36				
Preventive and rehabilitation measures	Pre-test	3.58	51.14	28.86	1.6193	9.9420	P<0.05 significant
	Post-test	5.6	80.00				

Fig. 11 : Conical diagram showing the aspect wise comparison of pre-test and post-test level of knowledge regarding disaster management among the students



The knowledge on concept of disaster among students in per test, the mean score was 8.4 and standard deviation was 2.852 and in the post test, the mean score was 8.6 and standard deviation was 2.852 with the effectiveness of

1.82 and paired "t" value of 6.823, and which shows statically highly significant (P<0.05).

The knowledge regarding types of disasters among students in pre test, the mean was 1.5, standard deviation was 0.7812 and in the post test, the mean score was 2.3 and standard deviation was 0.7812 with the effectiveness of 26.66 and paired "t" value of 9.318, and which shows statically significant (P<0.05).

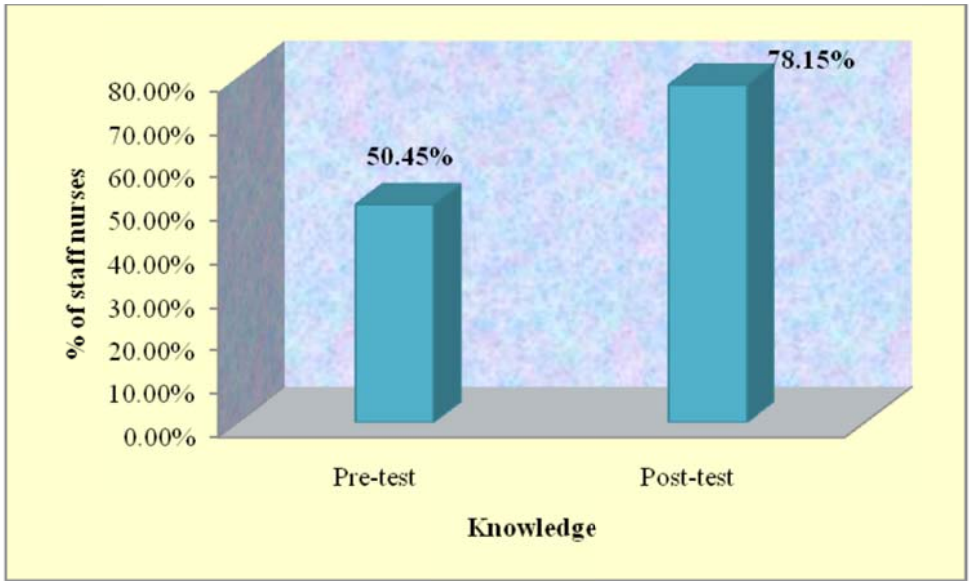
The knowledge on disaster management among students in pre test, the mean score was 9.3, standard deviation was 3.2343 and in the post test, the mean score was 14.7 and standard deviation was 3.2343 with the effectiveness of 28.42 and paired "t" value of 11.990, and which shows statically highly significant (P<0.05).

The knowledge on preventive and rehabilitation measures among students in pre test, the mean score was 3.58, standard deviation was 1.6193 and in the post test, the mean score was 5.6 and standard deviation was 1.6193 with the effectiveness of 28.86 and paired "t" value of 9.9420, and which shows statistically highly significant (P<0.05).

TABLE 6: COMPARISON OF MEAN SCORES BETWEEN PRE TEST AND POST TEST OF KNOWLEDGE REGARDING DISASTER MANAGEMENT (OVERALL)

Aspect	Observation	Mean	Mean %	SD	't' value	'p' value
Overall knowledge scores	Pre-test	20.18	50.45	1.826	42.375	(P<0.05 Highly significant
	Post-test	31.26	78.15			

Fig. 12 : Bar diagram showing the comparison of overall mean score between pre-test and post-test level of knowledge regarding disaster management among the students



SECTION 4

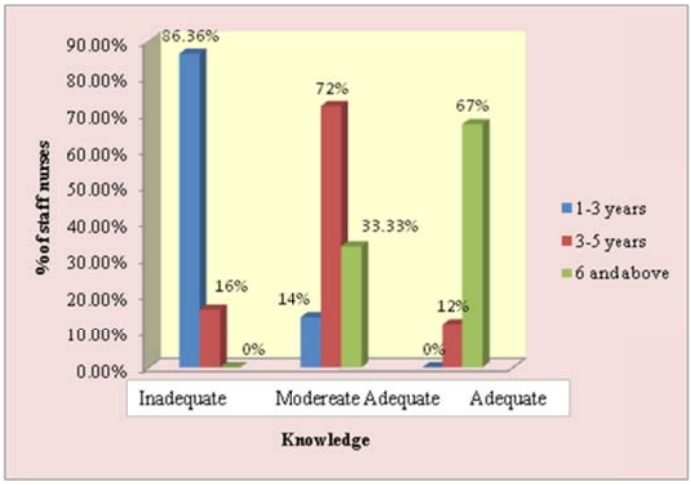
TABLE 7 : ASSOCIATION BETWEEN THE KNOWLEDGE OF DISASTER MANAGEMENT WITH THE DEMOGRAPHIC VARIABLES IN PRE-TEST

Demographic variables	Inadequate		Moderate		Adequate		Chi-Square
	F	%	F	%	F	%	
Age							χ^2= 2.5848 df = 6 P>0.05 non-Significant
17-18	10	38.46	14	53.84	2	7.70	
18-19	8	50.00	6	37.50	2	12.50	
19-20	2	50.00	1	25.00	1	25.00	
20 and above	3	75.00	1	25.00	0	0.00	
Sex							χ^2= 0.08001 df = 2 P>0.05 non-Significant
Male	1	25.00	2	50.00	1	25.00	
Female	22	48.00	20	43.00	4	9.00	
Educational Qualification							χ^2= 2.81790 df = 4 P>0.05 non-Significant
DGNM I year	12	44.50	13	48.50	2	7.00	
DGNM II year	7	64.00	4	36.00	0	0.00	
DGNM III year	4	33.33	5	41.67	3	25.00	
Training unit							χ^2= 4.96134 df = 4 P>0.05 non-Significant
Ward	18	90.00	2	10.00	0	0.00	
ICU	3	43.00	4	57.00	0	0.00	
Emergency and causality	2	8.69	16	69.57	5	21.74	

Class wise experience							χ^2= 17.1727 df = 4 P>0.05 non-Significant
I Year	19	86.36	3	14.00	0	0.00	
II Year	4	16.00	18	72.00	3	12.00	
III year	0	0.00	1	33.33	2	67.00	

From the above table, it is evident that there is significant association between the pre-test knowledge of the students with the demographic variables "working experience". There is no significant association between the pre-test knowledge of the students with demographic variables namely age, sex, educational qualification and working unit.

Fig.13: Bar diagram showing association between the pre-test Knowledge Scores with their working experience



In pre test, the students with the training experience of 1-3 months were with an adequate, moderate knowledge level with the percentage of 86, 14. The students with the training experience of 3-5months were with an inadequate, moderate, adequate knowledge with percentage of 16, 72, and 12. The students with the training experience of 6 and above months were with moderate and adequate knowledge level with the percentage of 33, 67.The demographic variable experience shows significance with the knowledge of students regarding disaster management with chi-square value of 17.1727 and the $p<0.05$.

CHAPTER –V

DISCUSSION, IMPLICATION AND CONCLUSION

This chapter deals with the research findings regarding knowledge of disaster management among the students.

1. To assess the existing level of knowledge of students on disaster of management.

The knowledge regarding disaster management among students in pre-test, the mean score was 20.18 and standard deviation was 1.826.

2. Evaluate the effectiveness of structured teaching programme on the knowledge of students by the comparison between the pre test and post test knowledge.

The effectiveness of structured teaching programme have been evaluated an effective with highly significant. Statistically it has been observed from the mean score of 31.26, standard deviation of 1.826 and the 't' value of 42.375 with the p value < 0.05.

Suja Suresh, 2005, Delhi, conducted a study to evaluate the effectiveness of structured teaching programme on knowledge and practice of disaster management among students which have been proven by a highly significant difference in knowledge and practice of students between the experimental group (mean difference 22.1, standard deviation 5.62) and control group (Mean difference 0.6, standard deviation 0.88), whereas, a positive correlation between the knowledge and practice in the experimental group in post-test. Thus, this study supports result of current study.

3. To identify the association between the selected demographic variables and the pre test knowledge of students on disaster management.

There was no significant association between the pre-test knowledge of the students with the demographic variables namely age, sex, year of studying

and training unit. There was significant association between the pre-test knowledge of the students with the demographic variable experience.

IMPLICATIONS OF STUDY

The findings of the study have implications in various field of nursing practice, nursing research, nursing education and nursing administration.

Nursing administration

- Nurse administrator should motivate the in-service education and continuing education in hospital and community settings to promote knowledge of the health personnel regarding disaster management.
- Nurse administrator can recommend the government and non government agencies to conduct an awareness regarding disaster and its management among the general public.

- The result of this study can be considered as a performance appraisal of the students and according to that in - service education can be planned to all specialty hospitals and in the community to improve the knowledge of health personnel and general public regarding disaster management

Nursing practice

- Students taking care of victim affected by the disaster should have a sound professional knowledge about the disaster management. It helps

to develop competency in emergency situation in various disasters.

Community

- Students working in the community setting should practice health education as an integral part of nursing profession.
- Community health students made some effort to improve their knowledge regarding disaster management, to take prompt action during disaster and reduce the consequences and repercussions of a disaster.

Nursing education

- Allotment of more theory and practice hours for the curriculum of nurse can be improve the competency of the nurse.
- The disaster management can be taught to the nursing students by various teaching techniques like workshop, conferences which gives a real life experience.
- Special courses on disaster management can be started and the students completing such courses can be certified and thus they can them self utilize in disaster management.

Nursing research

Review of literature reveals the less research has been done on disaster management -which shows that, in India the nurse researchers have conducted very few study. Nurse researcher have been recommended to conduct more

study on disaster management among the health professional and general public which creates an awareness among the health personnel as well as public.

RECOMMENDATION

- This study can also be done to assess the practice and attitude of the students on disaster management.
- The study can be replicated by using a large sample to validate the findings for generalization.
- Similar study can also be conducted in community area/ general public to improve the knowledge and practice of public regarding disaster management.
- Disaster nursing should be included in all types of nursing programmes.

CONCLUSION

Disaster is a serious disruption of the functioning of society, causing widespread human, material, environment losses, which exceed the ability of the affected society to cope using its own resources.

In developed countries after a major disaster, the need for search, rescue and st aid is likely to be very effective. In developing countries like India, due to lack of resources, knowledge, ignorance and inadequate technological advance may lead to an ineffective disaster management.

The main concept of this study was to make the students aware of the disaster management because they are the disaster team members. Keeping this importance in mind, the researcher prepared a structured teaching programme further evaluated by structured questionnaire on disaster management and distributed that to the students to improve and enhance their knowledge on disaster management. It was found that the structure teaching programme improved the knowledge of the students. This study plays an important role in prevention of impact and management of impact in various disasters. This study has not only improved the knowledge of the students, it could be considered as a part of continuing professional development of students in all aspects.

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ANNEXURE - I

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Sakthinagar - 638 315. Bhavani Taluk, Erode District, Tamilnadu.

Ref. No. :

Date :

LETTER SEEKING PERMISSION TO CONDUCT PILOT STUDY

From

MR.ARUN JOTHI J,M.Sc., (N) II Year,
(Speciality – Medical Surgical Nursing),
Dr. Mahalingam College of Nursing,
Sakthi Nagar (Po),
Bhavani (TK), Erode (DT),
Tamilnadu.

To

Mr. Malaikan Nadar
William Nursing School
Kesikankovil, Kanyakumari.

Principal,
William Nursing School,
Kesikan Kovil, Kanyakumari.

PRINCIPAL
College of Nursing
Sri Adichunchanagiri Shikshana Trust
Dharmarathnakara Dr. Mahalingam Institute
of Paramedical Sciences & Research,
Sakthinagar, Bhavani Taluk,
Erode Dist. - 638 315.

Respected Sir / Madam,

SUB : Permission to conduct study - Reg.

- - - - -

I, the II year M.Sc., Nursing student of Dr. Mahalingam College of Nursing, Sakthi Nagar. As a partial fulfillment of Master of Science in Nursing, I have undertaken the following research study, which has to be submitted to The Tamilnadu Dr.M.G.R.Medical University, Chennai.

RESEARCH STUDY:

"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING DISASTER MANAGEMENT AMONG STUDENTS OF SELECTED NURSING SCHOOLS AT KANYAKUMARI DISTRICT''

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Ref. No. : *Date .....*

I kindly request you to permit me conduct the study on the effectiveness of structured teaching program on knowledge regarding disaster management among students of selected nursing schools at your esteemed school with effect from ---------- to ----------.

I kindly request you to permit me to conduct the proposed study. Please, kindly do the needful.

Thanking you,

Date :

Place :

Yours Sincerely,

Arun Jothi

(ARUN JOTHI J)

Head Office : Sri Adichunchanagiri Shikshana Trust®, Sri Adichunchanagiri Kshethra. PIN : 571 811. Nagamangala Taluk, Mandiya Dist., Karnataka.

ANNEXURE - II

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Sakthi Nagar (Po),
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To

Prof. Solomon Msc(N)
Lahima School of Nursing
Chungankadai, Kanyakumari

Principal,
Lahima School of Nursing,
Chugankadai, Kanyakumari.

PRINCIPAL
College of Nursing
Sri Adichunchanagiri Shikshana Trust
Dharmarathnakara Dr. Mahalingam Institute
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Thanking you,

Date :

Place :

Yours Sincerely,

Arunjothi

(ARUN JOTHI J)

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ANNEXURE – III

CONTENT VALIDITY CERTIFICATE

This is to certify that the student ARUN JOTHI J, S/o.Mr. Jothi A studying in M.Sc., (N) II year Post Graduate Degree Course at Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research, Sakthi Nagar.

Topic Entitled:

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Date: 20.2.2018

Place: Sakthinagar

D Thilagavi

Signature of Guide with seal

HEAD OF THE DEPARTMENT
Medical Surgical Nursing,
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Akola

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Signature of Expert with seal

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Hindu Mission College of Nursing 103, GST Road Date: Tambaram West, Chennai-45

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Date: 18/9/14

Place: Sakthi nagar

S. Mahesraja. 9/5/18

Signature of Expert with seal

(Dr. S. MAHESRAJA)

Medical Officer,
VMK Hospital,
Sakthi Nagar.

CERTIFICATE BY THE EDITOR

This is to certify that the dissertation entitled **"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURE TEACHING PROGRAMME ON KNOWLEDGE REGARDING DISASTER MANAGEMENT AMONG STUDENTS OF SELECTED NURSING SCHOOLS AT KANYAKUMARI DISTRICT"** is a bonafide research work done by **Mr.Arun Jothi.J. II Year, M.Sc.,** (Nursing) student of Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research, Sakthi Nagar, Bhavani Taluk, Erode District. **Mrs. T.S. Sumithra Devi., M.A., M.Phil.,** edited this manuscript on behalf of the partial fulfillment of the prerequisite for the degree of **Master of Science in Nursing** (Medical and Surgical Nursing).

Date : 17/02/2015

Place: Sakthi Nagar

17/2/2015

Signature of Editor

CONTENT VALIDITY CERTIFICATE

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Topic Entitled:

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Date: 14.8.2014

Place: Erode

Dr. [illegible] (Dr. DHANAPAL)

Signature of Expert with seal

Professor of statistics

ANNEXURE V

Section – 1

DEMOGRAPHIC VARIABLES PROFORMA

PURPOSE

This Performa is used to measure the demographic variables such as age, sex, working unit, professional experience of students

INSTRUCTION

Read the following items carefully and select one correct response by placing the appropriate tick mark in the space provided.

1. Age in years [ ]

    a) 21-25

    b) 29-30

    c) 31-35

    d) 36 and above

2. Sex [ ]

    a) Male

    b) Female

3. Educational qualification [ ]

    a) Diploma in nursing

    b) Pc Bsc

    c) Degree

4. Working unit [ ]

    a) Ward

    b) ICU

    c) Emergency and Causality

5. Studying years [ ]

    a) 6 months

    b) 1-3 years

    c) 3 and above

Section 2: Knowledge regarding concept of disaster

1. What is a disaster?

    a) Changing event

    b) Situational event

    c) Calamitous event

    d) Traumatic event

2. What are all the features of disaster?

    i. Un predictability, unfamiliarity

    ii. Speed, urgency

    iii. Speed, urgency, uncertainty, threat.

        a) (i), (ii)

        b) (ii), (iii)

        c) (ii), (iii)

        d) (i), (iii)

3. How many phases are there in disaster?

    a) Three

    b) Four

    c) Five

    d) Six

4. The number of injuries and death during disaster deepened on?

    a) Types, density, distribution, and degree of the preparedness.

    b) Types, density.

    c) Density, distribution

    d) None of the above

5. What are the effect of disaster?

    a) Premature deaths.

    b) Environmental imbalance

    c) Nutritional deficiencies.

    d) All of the above.

6. What is the common disease found after flood?

    a) Fort bit.

    b) Heat stroke.

    c) Respiratory disease.

    d) All of the above.

7. What are the health effects of massive chemical exposure?

   a) Disease cluster and deaths.

   b) Air pollution.

   c) Contamination of food and water

   d) None of the above

8. What are all the effects of biological disaster?

   a) New unknown disease

   b) Known disease

   c) Chronic disease

   d) All of the above

9. Which ministry is responsible for air accident?

   a) Ministry of health

   b) Ministry of home affairs

   c) Ministry of civil aviation

   d) Ministry of environment and forests.

10. The type of disaster more prevalent in India is …….

    a) Flood

    b) Drought

    c) Landslides

    d) Aviation

11. Which are the international agencies providing health humanitarian assistance?

    a) WHO

    b) FAO

    c) ECHO

    d) All of the above

Section 3: Knowledge regarding types of disaster.

12. What are all examples of natural disaster?

    a) Riots, tornado, earth quake

    b) Terrorism, bombing, fire

    c) Expulsion, intended damage to properties, riots.

    d) Tornado, volcanic eruption, earth quake.

13. What among the following is not considered as a slow Disaster?

    a) Drought

    b) Food shortage

    c) Famine

    d) Landslide

14. What are the examples of manmade disaster?

    a) Bombing, plane crashing

    b) Landslide, tempest

    c) Tornado, twister

    d) Cyclone, earth quake

Section 4: Knowledge regarding disaster management

15. What is disaster management?

    a) Development of recovery plans

    b) Develop the recovery plan and implementation

    c) Implementation of plan

    d) Prevention of disaster.

16. What one of the following is not a principle of disaster management?

    a) Prevent the occurrence

    b) Minimize the number of causalities

    c) Rescue the victim

    d) Identify the person and area.

17. What dose disaster preparedness refers to?

    a) Action taken to prevent or reduce the harmful effect of disaster.

    b) Activities to prevent subsequent disaster

    c) Involves plans of being ready, properly equipped to face disaster

    d) Being prepared to reduce the future disaster.

18. Among the following what is not correct response during pre impact period?

    a) Fore cast

    b) Early warning

    c) Preparedness

    d) Monitoring of impact

19. Following are the disaster management in impact phase EXCEPT.

    a) Medical care

    b) Supply of food and water

    c) Supply of essential items

    d) Estimating loss of life and property

20. Name the process of classifying the sick and the injured according to the urgency and type of condition?

    a) Damage assessment

    b) Emergency assessment

    c) Triaging process

    d) Vulnerability assessment

21. How many categories are there in triage?

    a) Two

    b) Three

    c) Four

    d) Five

22. What condition will not come under high priority?

    a) Respiratory arrest

    b) Conscious patient with head injury

    c) Open chest wound

    d) Burns involving respiratory tract

23. What are the conditions comes under lowest priority?

    a) Minor bleeding and wound

    b) Obvious death

    c) Moderate burns

    d) All of the above

24. What is the significance of red tag in triaging process?

    a) Accident

    b) Fire

    c) Medical management

    d) Bomb threat

25. If yellow tag is used in color cording, what dose it imply on treatment priority?

    a) Require immediate treatment

    b) Second priority

    c) Third priority

    d) Fourth priority

26. How the external disaster be announced?

    a) Code yellow

    b) Code brown

    c) Code grey

    d) Code black

27. Who are the members in disaster team?

    a) Administrative officers, police

    b) Physicians, nurses, rescue team

    c) Volunteers

    d) All of the above

28. When triage starts or begins?

    a) Disaster site

    b) Patient enters in hospital

    c) During transportation

    d) Preparedness

29. What is not a suitable measure to manage the toxic chemical?

    a) Identification of the hazard

    b) Assessment of the risk to the community

    c) Safe measures and alternatives

    d) Health education

30. What is the disaster management in flood?

    a) Turn off the electricity

    b) Protect people

    c) Beware of water contamination

    d) All of the above

31. What are measures that should be taken during cloud of toxic fumes?

    a) Close the doors and windows

    b) Stop up air intake

    c) Turn off ventilation and air conditioners

    d) All of the above

32. What measures to be following for personal protection?

    a) Do not use the telephone except to call

    b) Listen to the messages broad cast

    c) Keep an emergency kit ready

    d) All of the above

33. What is not be done in case of earthquake?

    a) Go back to the damage area

    b) Avoid storing heavy object and materials in height

    c) Stay away from the stairs

    d) Prepare a family emergency kit

Section 5: Knowledge regarding preventive measures and rehabilitation measures in disaster

34. What are the disaster prevent measures?

    a) Prevent human settlement in low-lying area

    b) Improvement of warning system

    c) Hazard-proof roads, bridges, canal, water reservoirs, power transmission lines.

    d) All of the above

35. Among the following, which is not a relevant, hygienic and sanitation measures after a disaster?

    a) Immunization

    b) Disposal of waste and excreta

    c) Fly proofing and rodents control.

    d) Health education.

36. How much dosage of chlorine tablet is used for 1 litter of drinking water?

    a) 2.5 gm.

    b) 2 gm.

    c) 0.5 mg.

    d) 0.125 mg.

37. In which type of disaster the immunization will be indicated?

    a) Biological disasters

    b) Chemical disasters

    c) Drought

    d) All of the above

38. Among the following, which is not a relevant to vaccination?

    i) Active immune

    ii) Passive immune

    iii) Cold-chain

    iv) Develop resistant

a) (i) (ii) (iii)

b) (ii) (iii) (iv)

c) (i) (iii) (iv)

d) (i) (ii) (iv)

39. What does disaster rehabilitation refer to?

a) Restore the pre occurrence of event

b) Restore the occurrence of event

c) Prevent the occurrence of events

d) Promote the occurrence of events

40. What is the disaster management in rehabilitation phase?

a) Temporary shelter and supply of water, food, cloths.

b) Repair of roads, electricity, and communication net work.

c) Restoration of health and educational facilities.

d) All of the above.